His intelligence was feebly developed, and was in any case quite below that of the other anthropoid apes, or even of the gibbons. Since the above note was presented by Alph. Milne-Edwards to the Paris Academy of Sciences the young gorilla died at the Jardin des Plantes.

NOTES

The portrait of the late Sir William Siemens, which we give this week as one in our series of Scientific Worthies, belongs to the previous volume of Nature, and is intended to accompany the memoir at p. 97.

The Secretary of State for India has determined that India shall be represented at the forthcoming International Prime Meridian Conference at Washington, and has nominated as the India Office delegate Lieut.-General R. Strachey, C.S.I. Capt. Sir Fred. J. O. Evans, R.N., K.C.B., F.R.S., and Prof. J. C. Adams, F.R.S., on the recommendation of the Science and Art Department, have been appointed delegates to represent the United Kingdom at the Conference.

On May 28, at an extraordinary meeting of the Vienna Academy of Sciences, Count Hans Wilczek was elected Honorary Member. In the Mathematical and Natural Science Section, Dr. Albrecht Schrauf, Professor of Mineralogy at the Vienna University, and Dr. Leopold Gegenbauer, Professor of Mathematics at the Innsbruck University, were elected Corresponding Members. As Foreign Honorary Members were elected Sir William Thomson, and Charles Hermite (Paris); as Foreign Corresponding Members, Prof. L. Leuckart (Leipzig), Prof. Edward Frankland, and Prof. Carl Nägeli (Munich).

The "Rede" Lecture was delivered on Wednesday, last week, in the Cambridge University Senate House, by Mr. Francis Galton, M.A., F.R.S. Mr. Galton, who had selected as the subject for the lecture "The Measurement of Human Faculty," stated that, although it had been a matter of controversy whether a more complete measurement of man's capacity could be attained than was already discovered by means of examinations which measured intellectual capacity, yet he would endeavour to demonstrate that as the capacity of man, taken in its widest sense, including character and physique, was finite, therefore it was measurable. He pointed out that an important adjunct to the attempt to measure human faculty would be records containing particulars regarding eyesight, colour-sense, hearing, breathing capability, height, span of arms, &c. At the Johns Hopkins University in America physical education and hygiene were compulsory on all students, and although the physical measurements taken were not compulsory yet few objected, and the result was that the most valuable statistics were collected, and in many instances good advice given to the students in what way to counteract the effects of any abnormal condition observed, such as irregularity of muscular development. Mr. Galton concluded by suggesting that a laboratory should be opened at Cambridge to investigate this new science. The cost would be small; the result, he ventured to predict, would be large and beneficial, for, by the compiling of continuous records of health, growth, and disease, much useful knowledge would be acquired, and by a long series of observations on the lines he had indicated it would be possible to measure the human faculty as accurately as, if not more so than, our system of examinations measures the intellectual faculty.

We understand that the Fishery Board for Scotland is anxious to have powers enabling it to remove obstructions which interfere with the ascent of salmon up several Scottish rivers. It is specially desirous to introduce as soon as possible a fishway at the falls, and this, when done, would open up some 500 miles of excellent fishing and spawning ground. Last week there were several interesting arrivals from fishery officers:—(1) A fine specimen of the "Opah fish" (*Lampris guttata*) was taken off Unst Island, Shetland, on May 22, and forwarded by the fishery officer to Prof. Ewart, University of Edinburgh. The fish, which measured 4 feet in length and over 2 feet in depth, has been handed over to Prof. Turner. This Opah will enable Prof. Turner to complete an account of the fish begun some years ago, when he received a somewhat smaller specimen from the Moray Firth. (2) A turbot with peculiar frontal process, an eye on each side of the head, both sides of the body equally dark, and provided with spines. (3) Mature sprats. It seems proved that sprats leave the estuaries in spring to spawn at sea. (4) Developing herring eggs. Taken along with similar specimens which have been arriving since October last, these show that herring spawn on the east coast from August until May, and not, as is usually supposed, only during August and September and during February and March.

In response to the appeal of the Prince of Wales, as President of the City and Guilds of London Institute, the following contributions have been already promised to the General Fund and to the Equipment Fund of the Central Institution, Exhibition Road, by the undermentioned Companies:—Fishmongers, 4000*l.*; Mercers, 2000*l.*; Clothworkers, 2000*l.*; Corporation of London, 1000*l.*; Skinners, 1000*l.*, and an increased subscription of 500*l.* annually; Leather-sellers, 500*l.*; Carpenters, 500*l.*; Armourers and Braziers, 300*l.*; Tallow Chandlers, 105*l.*; Scriveners, 105*l.*; Stationers, 52*l.* 10*s.* annually; Clockmakers, 26*l.* 5*s.* The letter of the President is still under the consideration of the Courts of several Companies, and it is confidently expected that the sum required will be obtained.

A CORRESPONDENT writes:—"Last week you had occasion to refer to the little attention which is given in our schools to the study of geography, and the consequent withdrawal of certain medals which were awarded by the Royal Geographical Society to the most proficient candidates from the public schools. The superiority of our Continental neighbours in this matter will be apparent to any one who visits the Educational Section of the International Exhibition, which has been so well organised in the new Technical Schools by Mr. R. Cowper. Here a society of teachers, known as the Brothers of the Christian Schools, exhibit a number of hypsometrical wall maps and physical atlases admirably calculated to give correct notions of the real configuration of the earth's surface. There is also a collection of small models in relief, some of local topographical interest, and others of general utility as illustrating the definitions and leading facts of physical geography. These maps and reliefs were all made by a member of the Society—Brother Alexis—who has successfully striven, in France and Belgium, to introduce rational methods into the teaching of political and physical geography. The interest taken in this subject by students in the schools and colleges of the Brothers in France is shown by a large number of albums of maps sent in by them. It is interesting to notice that many of the local maps were drawn from surveys made by the students under the direction of their teachers. Such field-work is decidedly the best for advanced students, and is sure to be done *con amore*. A second collection sent from the Collegiate Schools of the same Society in Belgium will be found in the Belgian Court. The teachers of those of our public schools from which geography has not been absolutely ostracised will do well to carefully examine the physical maps and reliefs of the Brothers, as well as the cartographical work of their students. The result must be an improvement in our methods. If the Educational Exhibition does no more than raise the standard of geographical teaching throughout the country, it will have served a useful purpose."

IT is worthy of note that the General Assembly of the Free Church of Scotland have approved of the establishment of a Chair of Natural Science in their Glasgow Theological College.

THE Council of the Hartley Institute, Southampton, have issued a circular with reference to the Geological Survey of Hampshire and the Isle of Wight. The Council think that it would be of great service to the landowners and inhabitants of the county that the Geological Survey should now be revised on the map of the 6-inch scale. This revision of the work previously carried out on the old 1-inch map would enable many errors in detail in the former work to be corrected, and would give the county a much more valuable and detailed geological map, the sheet of which relating to any parish could be had separately by paying the cost of the map and the cost of colouring. At present this is not to be obtained, nor is it likely to be obtainable unless the Government can be induced to survey the county, geologically, on the map of the 6-inch scale as some other counties have been surveyed. This work, taking the old Survey as the basis, would not be expensive. The Hartley Council intend to request the members of the House of Lords connected with the county, and the representatives of the county and boroughs of Hampshire in the House of Commons, to urge the Government to revise the County Geological Survey upon the 6-inch map. We trust the Government will readily accede to the request; a minute revision of this geologically interesting district would be of great service to science.

ONE afternoon, *Science* states, during the recent cruise of the *Albatross* in the Caribbean Sea, several boobies were flying around the ship, and finally one of them alighted on the forecastle, when he was caught by one of the men, who, after amusing himself and his shipmates a while, tossed it overboard, expecting it would take itself off as quickly as possible; but, to their surprise, it returned immediately, alighting on the rail, where nearly every man of the crew had congregated to watch its performance. It did not seem to be distressed in any way, and went deliberately to work rearranging its plumage, which had been somewhat ruffled by handling, calmly surveying the noisy crowd of men gathered around it. They tried to feed it, offering everything that could be found, but nothing seemed to suit its taste. It would not submit quietly to being handled, but made no attempt to fly away; and, although tossed overboard six times during the afternoon, it returned as often, invariably alighting in the same place among the men, where it finally took up its quarters for the night, remaining till six o'clock the next morning, when it left without ceremony, and was not afterwards seen.

THE Esposizione Generale Italiana was opened at the end of April in Turin, and at the end of May the inauguration of the International Electrical Exhibition took place. Prof. Ferraris is the director of the International Department. A good display of meteorological instruments has been made in a tower belonging to the front monumental entrance. An inscription states that the Italians having inaugurated meteorology in the world are anxious to show the progress which this department of knowledge has made in its native country. The extent of the exhibition is about 1 kilometre by 450 metres on the banks of the Po, in the old gardens of Valentino Castle, where Beccaria executed his celebrated experiments on thunderstorm phenomena about 100 years ago.

A VIOLENT shock of earthquake occurred on the night of May 19 at the Island of Kishm, near the mouth of the Persian Gulf. No less than twelve villages were destroyed. Two hundred people were killed, and many others injured. Kishm is the largest island in the Persian Gulf, and is surrounded by many smaller islands. It is seventy miles long, and averages twelve miles broad. The population, chiefly Arabs, number about five thousand.

THE latest news from the Sagastyr Meteorological Station on the Lena, published by the St. Petersburg *Izvestia*, is dated November 25. The expedition remained to winter a second year, and will continue its observations until the present month. Last summer M. Eigner made the survey of two branches of the Lena, from the place where Capt. De Long landed on his sad journey. Dr. Bunge revisited the place where the Adams mammoth was found, and mapped also the place where De Long perished with his companions. The summer was altogether very cold, the average temperature of the three summer months being only $3^{\circ}{\cdot}25$ C. The sky was cloudy throughout, and fogs were nearly continuous. The lowest temperature observed last winter was on February 7, when the thermometer fell to $-52^{\circ}{\cdot}3$ C.

THE East of Scotland Union of Naturalists' Societies holds its first annual meeting at Dundee to-morrow and Saturday.

MR. ARCHIBALD BARR, B.Sc., C.E., "Young" Assistant to Dr. James Thomson, F.R.S., Professor of Civil Engineering and Mechanics in the University of Glasgow, has been appointed Professor of Civil and Mechanical Engineering in the Yorkshire College.

MR. W. PHILLIPS, F.L.S., of Shrewsbury, has in preparation "A Manual of the British Discomycetes, with Descriptions of all the Species of Fungi hitherto found in Britain, included in the Family, and Illustrations of the Genera."

THE last volume of the *Memoirs* of the Ethnographical Section of the Russian Geographical Society (vol. xii.) contains a rich collection of Russian folk-lore collected in the Samara province on the Volga, by D. N. Sadovnikoff.

THE additions to the Zoological Society's Gardens during the past week include a Himalayan Bear (*Ursus tibetanus*) from

North India, presented by Lieut. E. A. P. Hobday; three Black-eared Marmosets (*Hapale penicillata* ♂ ♂ ♂) from South-East Brazil, presented by Mr. H. F. Makins, F.Z.S.; a Purple-faced Monkey (*Semnopithecus leucoprymnus* ♀) from Ceylon, presented by Mr. J. W. Dring; a Common Heron (*Ardea cinerea*), British, presented by Mr. T. E. Gunn; a Leach's Laughing Kingfisher (*Dacelo leachi*) from Queensland, presented by Dr. Carl Lumholtz; a Laughing Kingfisher (*Dacelo gigantea*) from Australia, presented by Mr. E. R. Oliver; a Great Grey Shrike (*Lonius excubitor*), British, presented by Mr. J. Pratt, F.Z.S.,; a Spotted Bower Bird (*Chlamydodera maculata*) from Australia, presented by Lieut.-Col. W. Hill James; four River Frogs (*Rana fortis*) from Germany, presented by Mr. G. A. Boulenger, F.Z.S., a Green Turtle (*Chelone viridis*) from West Indies, presented by Mr. J. Wyan Thomas; a Tarantula Spider from Brazil, presented by Mr. C. A. Craven, C.M.Z.S.; a Common Boa (*Boa constrictor*) from South America, deposited; a Chimpanzee (*Anthropopithecus troglodytes* ♀), a Bosman's Potto (*Perodicticus potto* ♂) from West Africa, a Duyker-bok (*Cephalophus mergens* ♀) from South Africa, a Ring-tailed Coati (*Nasua rufa*) from South America, two Blood-stained Finches (*Carpodacus hæmorrhous*) from Mexico, a Snow Bunting (*Plectrophanes nivalis*), North European; an Angola Vulture (*Gypohierax angolensis*) from West Africa, a Guatemalan Amazon (*Chrysotis guatemalæ*) from Central America, four Elegant Grass Parrakeets (*Euphema elegans*) from South Australia, two Wild Ducks (*Anas boschas*), two Call Ducks (*Anas boschas*, var.), two Common Wigeon (*Mareca penelope*), two Common Pintails (*Dafila acuta*), six Common Teal (*Querquedula crecca*), two Muscovy Ducks *Coirina moschata*), European, two Mandarin Ducks (*Æx galericulata*) from China, purchased; a Common Wombat (*Phoscolomys wombat*) from Tasmania, received in exchange.

OUR ASTRONOMICAL COLUMN

The Total Solar Eclipse of 1889, January 1.—The general circumstances of most of the total eclipses of the sun more or less available for physical observations before the close of the present century have been already described in this column: it remains, however, to make reference to that which will take place on January 1, 1889, and which will be total in the western part of the United States.

The central eclipse commences on the North Pacific Ocean in about longitude 178° E. and latitude 53° N.; it occurs with the sun on the meridian in 137° 57′ W. and 36° 42′ N., and ends in about 95° W. and 52° 15′ N. It strikes the American coast in the State of California in latitude 38° 50′, and the town of Hamilton, according to our approximate computation, would appear to be upon the central line: here the middle of totality occurs at 1h. 40m. 34s. local mean time, with the sun at an altitude of nearly 25°, and the duration of the total phase is 2m. 4s. The important observatory lately established on Mount Hamilton is outside of the zone of totality, the magnitude of the eclipse at that station being 0·98, and the middle at 1h. 45m. The following are points upon the line of central eclipse:—

Longitude	112° 34′ W.	Latitude	43° 15′ N.	Sun's altitude	15°·9
,,	106 14 ,,	,,	46 15 ,,	,,	10·2
,,	100 21 ,,	,,	49 9 ,,	,,	5·0

It will be seen that the sun will set totally eclipsed on British territory after the total phase has crossed the Assiniboine River and the southern extremity of Lake Winnipeg.

The second total solar eclipse in 1889 was described in Nature in June 1877. It will be visible in Martinique, St. Lucia and Barbados, but with the sun at a low elevation, totality continuing about one minute and three-quarters, and will meet the coast of Africa in Angola in about 10° south latitude, where the total phase will have a duration of 3m. 30s., the sun at an altitude of 56°.

Variable Stars.—In 1859 Hencke of Driesen drew attention to a star in Carrington's Redhill Catalogue which he had found to be variable. It is No. 1902, and was observed on three nights in March and April 1856, the magnitude being twice noted 9·5 and once 10·5. Hencke had observed it 8m. at the time he wrote, but believed it had probably been invisible with his means for some years previously. His notice appears in Peters' *Zeitschrift für populare Mittheilungen aus dem Gebiete der Astronomie*, &c., vol. i. p. 131. The star is not found in the catalogues of Fedorenko or Schwerd. Its approximate position for the beginning of 1885 is in R.A. 12h. 44m. 49s., N.P.D. 7° 39′·8.

At p. 150 of the Redhill Catalogue Carrington mentions that Oeltzen's No. 515, a seventh magnitude once observed by Schwerd had been looked for ineffectually. Oeltzen had re-examined his reduction of the observation which was made at Speyer on October 19, 1826, and found it correct. The star's place for 1885 is in R.A. 8h. 27m. 54s., N.P.D. 6° 52·7′. Close to this position there is a star in Fedorenko's catalogue from Lalande's observations (Nos. 1305-6) which is once called 8m., and once 5·6, the observations having been apparently made on March 19 and 20, 1790. It is 6m. in Groombridge, and 7m. in the *Durchmusterung* and in the Radcliffe Catalogue. Perhaps the discordance in Lalande's published estimates is occasioned by a misprint, and unfortunately there are several obvious errors of this kind in the catalogue deduced from his observations. The star in question is Groombridge 1431.

While writing upon polar variables we may once more refer to Bradley 396, R.A. (1885) 2h. 53m. 58s., N.P.D. 8° 58′·6, which, unless the existence of very improbable errors of estimation in the various catalogues is admitted, would appear to vary between the fifth and seventh magnitudes at the least, and there is a suspicion that the period may not be long.

A minimum of χ Cygni was due on May 22, and a maximum may be expected about November 16; from three determinations Schmidt found that the minimum preceded the maximum 178 days. The average period since 1877 has been 408½ days. The variable is the true χ (Bayer) Cygni, not the 17 Cygni of the catalogues.

GEOGRAPHICAL NOTES

The fifth fascicule of A. E. Nordenskjöld's "Popular Scientific Appendix to the Voyage of the *Vega*" ("Studier och Forskningar föranledda af mine resor i höga norden") will be most welcome to the general reader, and we hope it may be translated into English. It contains a profusely illustrated, lively sketch, by M. Hans Hildebrand, on art among lower primitive populations. The drawings of the Chukches are especially remarkable. Caravans of sledges drawn by reindeer or by dogs, hunting scenes, splitting drift-wood, and sea-hunting, are most interesting, and not the slightest mistake is possible as to what the Chukche artist intended to represent. The Chukches are as successful, too, in drawing subjects less known to them, such as the *Vega* at its winter-quarters, or two men of the crew exercising in fencing. The most remarkable piece is that given to Baron Nordenskjöld by Lord Walsingham, which is reproduced by means of photography. The original is drawn on walrus-skin, and represents on the borders of the skin the shores with their hills, Chukche settlements, and a variety of scenes from Chukche life on shore; while the interior contains a variety of scenes from sea-hunting, harpooned whales pretty well represented with their waterspouts, ships, boats, and so on. The Europeans, sometimes with umbrellas, sometimes fighting with Chukches, are perfectly recognisable. The engravings showing the carvings in bone that are made by Chukches and Esquimaux are also very interesting, whilst other drawings allow us to compare the Northern primitive art with the art of Boshmans and North American Indians. M. Hildebrand's remarks on the art of prehistoric man and his parallels with the Normannic drawings—also well illustrated—will be equally attractive to the general reader. The same fascicule contains the first pages of a paper on the life of insects in Arctic regions, by M. Christopher Aurivillius.

The *Bolletino* of the Italian Geographical Society for May contains a brief account of Signor Maurizio Buonfanti's late expedition across North Africa. The traveller, leaving Tripoli early in the month of April 1881, proceeded first in the direction of Lake Chad, mainly along the route already followed by Denham and Clapperton, Barth, Rohlfs, and other modern explorers. His chief object was to penetrate into the hitherto unexplored region stretching south from Adamawa, which territory was reached by the direct road from Kuka on Lake Chad through